

Recovery Plan Action Status

Plan Name: Virgin River Fishes Recovery Plan

Plan Status: Final Revision 2

Plan Date: 19-Apr-95

Lead Agency: USFWS

Lead Office: Utah Ecological Services Field Office

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Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	2	1.11	Review and update existing populations and genetic monitoring protocols and sampling stations within the Virgin River	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Management: Propagation, Management: Reintroduction	Internal Field Assistance, Internal Technical Assistance	This project has been initiated with UDWR taking the lead; see comment 1.32
Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	2	1.12	Implement monitoring procedures	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Management: Propagation, Management: Reintroduction	Internal Field Assistance, Internal Technical Assistance	
Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	2	1.13	Maintain and update Virgin River Fishes Data Base	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah State University, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Other: Administration	Contract	Data base has been maintained by Utah State University for the Program and Recovery Team.
Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	2	1.14	Prepare a standardized annual report on population trends	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Research: Population Surveys	Contract, Internal Field Assistance, Internal Technical Assistance, Species Expert	Part of ongoing agency efforts; UDWR providing more in depth annual summaries than generated with more long term, (cursory) Recovery Team monitoring.

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Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus</i> <i>argentissimus</i>)	1	1.21	Establish fish barriers at suitable sites	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah State University, University of Nevada Las Vegas, Washington County Water Conservancy District, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Management: Predator and Competitor Control	Contract, Internal Administrative, Internal Field Assistance, Internal Technical Assistance	Webb-Hill and Stateline Barriers have been constructed; however, the Webb-Hill barrier was buried by sediment in a December 2010 flood and the State- line barrier is ineffective at higher flows. The Program has constructed a barrier in the Virgin River Gorge and is awaiting approval for the use of rotenone in AZ to remove red shiner from above this structure. A barrier is planned at Halfway Wash and is currently in design phase and the Program is planning to add 3 feet to the top of the State-line barrier.

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Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	1	1.22	Eradicate or reduce nonnative fish species from below Johnson Diversion to Lake Mead	Ongoing Current	Prior to FY 1995		Nevada Department of Wildlife, Arizona Department of Game and Fish, Washington County Water Conservancy District, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, Utah Division of Wildlife Resources	Acquisition: Management Agreement	Internal Administrative	UDWR has the lead on nonnative control, which entails a large mechanical control effort (seining) and periodic chemical treatments. Late in 2006 and in 2007 UDWR determined that recently constructed streambank stabilization structures may provide refuge for nonnative species during chemical treatments; complicating the already complicated treatment process. From 2008 to 2010 red shiner were eliminated in the upper Virgin River in all habitat upstream of the state-line fish barrier. Red shiner reinvaded the upper VR in late 2010 and this area will be treated with rotenone in fall 2011.
Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	1	1.23	Reestablish native fishes from below Johnson Diversion to Lake Mead	Ongoing Current	Prior to FY 1995		Nevada Department of Wildlife, Arizona Department of Game and Fish, Washington County Water Conservancy District, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, Utah Division of Wildlife Resources	Acquisition: Management Agreement	Internal Administrative	Cost covered in task 1.2.2. Woundfin have been stocked in the lower Virgin since 1982. WF have been stocked in the upper Virgin by the Program since 2003. VR chub were stocked in the upper Virgin since 2006. However, instream water quality conditions do not support stocked fish.

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Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	2	1.31	perfect propagation techniques for Virgin River chub and woundfin	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, University of Nevada Las Vegas, Washington County Water Conservancy District, U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, Fisheries, Utah Division of Wildlife Resources	Acquisition: Management Agreement	Internal Administrative	Dexter NFTC has been refining propagation techniques on WF since 1979. UDWR's Wahweap facility is being used to grow WF. The Bozeman Fish Technology Center is in the second year (2009) of a three year study that will provide more information on intensive culture techniques for woundfin.
Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	2	1.32	Develop propagation protocols and establish production goals for Virgin River Chub and woundfin	Partially Complete	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Management: Propagation	Internal Administrative	This task will be accomplished as part of ongoing Recovery Team efforts upon successful completion of tasks 1.3.1. UDWR recently drafted Salvage, broodstock, and culture plans for WF, VRC, and spinedace.
Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	2	1.33	Conduct propagation and reintroduction programs	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Acquisition: Management Agreement	Internal Administrative	see comment for 1.32

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Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus argentissimus</i>)	2	2.11	Review and update existing habitat and water quality monitoring protocols and sampling stations	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Management: Habitat Maintenance and Manipulation	Internal Administrative	UDWR monitors habitat at population response stations; the Program has developed SOW to incorporate DO, turbidity and temp at various monitoring locations. The Utah Field Office has received preventing extinction funding to begin an intensive basin wide water quality research project to better manage water quality issues in the upper Virgin River. This study was begun in mid 2011
Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus argentissimus</i>)	2	2.12	Implement monitoring procedures	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Acquisition: Management Agreement	Internal Field Assistance	To be done as part of ongoing agency programs; see comment 2.11
Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus argentissimus</i>)	2	2.13	Expand Virgin River Data Base to include habitat data	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Other: Administration	Contract	To be done as part of ongoing agency programs. USU has incorporated available information; the Program intends to gather aerial photos to update baseline in 2006
Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus argentissimus</i>)	2	2.14	Develop a standardized annual report on habitat and water quality changes	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Acquisition: Management Agreement	Labor type not yet selected	To be done as part of ongoing agency programs. The Program has recently funded investigations of temperature and DO as limiting factors.

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Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus</i> <i>argentissimus</i>)	3	2.21	Identify and define degraded habitats	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Washington County Water Conservancy District, U.S. Bureau of Reclamation, Utah Division of Wildlife Resources	Acquisition: Management Agreement	Internal Field Assistance	Ongoing agency activities; UDWR continually monitors at population response stations. In 2006, the Service consulted with USACE on their permitting of sediment management activities at the WCWCD's Quail Creek Diversion Dam. An Interim Sediment Management Plan was implemented to reduce stressful conditions associated with the periodic release (sluicing) of anoxic sediments. Sluicing operations continue to be refined through adaptive management process.
Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus</i> <i>argentissimus</i>)	3	2.22	Develop habitat restoration plans	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Washington County Water Conservancy District, U.S. Bureau of Reclamation, Utah Division of Wildlife Resources	Acquisition: Management Agreement	Contract	Program has funded development of Baseline Reports and Santa Clara Restoration Plan. Other Program studies address include restoration of passage; construction of barriers, installation of fish screens, tamarisk control, and flow management.

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Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	3	2.23	Implement and monitor habitat restoration projects	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Washington County Water Conservancy District, U.S. Bureau of Reclamation, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Management: Habitat Maintenance and Manipulation	Internal Field Assistance, Internal Technical Assistance	Ongoing Program activity.
Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	1	2.3	Develop instream flow recommendations needed for the preservation of native fish communities and their habitats within the Virgin River	Ongoing Current	FY 2005		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah State University, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Research: Habitat Requirements	Internal Field Assistance, Internal Technical Assistance	Program is in the process of identifying flows need to sustain native community below Wash Fields Diversion / Screen.
Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	1	2.4	Implement flows and monitor response of the native fish community	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah State University, University of Nevada Las Vegas, Washington County Water Conservancy District, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, Utah Division of Wildlife Resources	Management: Habitat Maintenance and Manipulation	Internal Administrative	Since 1982 Quail Creek BO flows have been maintained in the Virgin River for fish; flows in Santa Clara associate with St Geo Water Reuse, and establishment of the Virgin spinedace agreement. A backflow pipeline is being installed and should be operational summer 2010 to provide about 20 cfs in the upper Virgin River.

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Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus</i> <i>argentissimus</i>)	1	2.5	Establish gaging stations and monitor instream flows at appropriate monitoring sites within the Virgin River	Ongoing Current	FY 2005		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah State University, University of Nevada Las Vegas, Washington County Water Conservancy District, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, Utah Division of Wildlife Resources	Management: Habitat Maintenance and Manipulation	Internal Administrative, Internal Field Assistance	This task will continue until recovery is obtained. Virgin at Virgin gage in place since 1906; Program has recently supplement flow, temp, turbidity, and DO monitoring. In total 8 gages are in place throughout Virgin River fishes critical habitat.
Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus</i> <i>argentissimus</i>)	1	2.6	Identify existing water use and legal water rights in the Virgin River Basin	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah State University, University of Nevada Las Vegas, Washington County Water Conservancy District, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Management: Habitat Maintenance and Manipulation	Internal Administrative	Will continue until instream flows are established and legally protected for Virgin River fishes; see comment in 2.4

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Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus</i> <i>argentissimus</i>)	1	2.7	Acquire high priority water rights for instream flows from Pah Tempe Springs to Lake Mead	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah State University, University of Nevada Las Vegas, Washington County Water Conservancy District, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, Utah Division of Wildlife Resources	Management: Habitat Maintenance and Manipulation	Internal Administrative	see comment 2.4; this action might be considered obsolete.
Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus</i> <i>argentissimus</i>)	1	2.8	Develop legally binding agreements to maintain instream flows from Pah Tempe Springs to Lake mead	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah State University, University of Nevada Las Vegas, Washington County Water Conservancy District, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, Utah Division of Wildlife Resources	Management: Habitat Maintenance and Manipulation	Internal Administrative	Will be done as part of ongoing agency programs; see comment 2.4; this action might be considered obsolete.

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Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus argentissimus</i>)	2	2.9	Acquire land and/or protective easements along the Virgin River for preservation of essential habitat for woundfin and Virgin River chub	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah State University, University of Nevada Las Vegas, Washington County Water Conservancy District, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, Utah Division of Wildlife Resources	Acquisition: Fee Title	Internal Administrative	Property near Ash Laverkin Cks confluence has been acquired. Land near Quail Creek diversion that would have been developed for rock mining was purchased by WCWCD.
Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus argentissimus</i>)	1	3.1	Maintain genetically appropriate broodstocks and refugia populations of woundfin and Virgin River chub at a minimum of two facilities	Complete	FY 2000 - FY 2004	FY 2006	U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Washington County Water Conservancy District, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Research: Genetics, Research: Taxonomic Studies	Contract, Graduate Student, Internal Administrative, Internal Field Assistance, Internal Technical Assistance	DNFTC recently completed a genetic analysis of wild vs captive WF pops. A similar effort was completed for VRC in 2008.
Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus argentissimus</i>)	2	3.2	Identify and prioritize proposed reintroduction sites	Partially Complete	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Management: Propagation, Management: Reintroduction	Internal Field Assistance, Internal Technical Assistance	see comment 1.32

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Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	2	3.3	Conduct baseline habitat assessments of proposed reintroduction sites	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Management: Habitat Maintenance and Manipulation, Management: Propagation, Management: Reintroduction	Internal Field Assistance, Internal Technical Assistance	see comment 1.32
Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	2	3.4	Develop and establish reintroduction protocols for woundfin and Virgin River chub	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Management: Habitat Maintenance and Manipulation, Management: Reintroduction	Internal Field Assistance, Internal Technical Assistance	Part of ongoing agency efforts; see comment 1.32
Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	2	3.5	Implement and monitor reintroduction of woundfin and Virgin River chub and woundfin	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Management: Reintroduction, Research: Demographic Studies, Research: Habitat Requirements, Research: Population Surveys	Contract, Internal Field Assistance, Internal Technical Assistance	Lower Virgin reintroductions monitored thru Recovery Team; Upper River stockings monitored thru specific Program funded efforts.
Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	1	4.1	Establish baseline genetic structure of Virgin River chub and woundfin	Complete	FY 2000 - FY 2004	FY 2008	U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Research: Genetics, Research: Taxonomic Studies	Contract, Internal Administrative, Internal Field Assistance, Internal Technical Assistance	see comment 3.1

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Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus argentissimus</i>)	3	4.10	Further define downlisting and delisting criteria	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah State University, University of Nevada Las Vegas, Washington County Water Conservancy District, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Research: Population Surveys	Contract, Internal Field Assistance, Internal Technical Assistance	Program recently funded an study to determine effort needed to estimate VRC pop size; refocused CPE type approach to monitoring population structure for both species.
Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus argentissimus</i>)	2	4.2	Determine historical variation in population abundance of Virgin River fishes, particularly the Virgin River chub and woundfin	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Research: Demographic Studies	Contract, Internal Administrative, Internal Field Assistance, Internal Technical Assistance, Species Expert, Volunteer	Long term monitoring has been conducted by Recovery Team; UDWR has intensified these efforts in the Upper River since year 2000.
Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus argentissimus</i>)	2	4.3	Determine relationship between environmental conditions and recruitment	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Research: Competition, Research: Disease, Research: Environmental Contaminants, Research: Habitat Requirements, Research: Population Surveys	Internal Field Assistance, Internal Technical Assistance, Species Expert	UDWR, other researchers have investigated limiting factors - Program has recently identified both a Critical Thermal Maximum (31 C) and a Behavioral Thermal Max (28 C), which have served as triggers for thermal rate reduction management (eg. releases from Kolob Reservoir and recent completion (2011) of a Sand Hollow backflow water system).

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Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	2	4.4	Determine effects of habitat conditions on various life stages of native Virgin River fishes	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Management: Habitat Maintenance and Manipulation, Research: Habitat Status, Research: Population Surveys	Internal Administrative, Internal Field Assistance, Internal Technical Assistance	see comment 4.3 and extensive ongoing monitoring programs.
Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	2	4.5	Assess interaction between flow dynamics and food production	Unknown			U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Work type not yet selected	Labor type not yet selected	assessed indirectly thru ongoing monitoring
Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	1	4.6	Determine effects of timing, magnitude, and duration of flows and physical habitat within the Virgin River	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Research: Population Surveys	Contract, Internal Administrative, Internal Field Assistance, Internal Technical Assistance	assessed thru extensive, long term monitoring programs
Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	1	4.7	Determine native fish community structure and interactions	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Research: Population Surveys	Internal Field Assistance, Internal Technical Assistance	reference UDWR's, Program supported monitoring efforts.
Virgin River Chub (Gila seminuda (=robusta)), Woundfin (Plagopterus argentissimus)	1	4.8	Determine migration movements	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Research: Population Surveys, Research: Reintroduction	Internal Field Assistance, Internal Technical Assistance	UDWR's, Program supported monitoring efforts have described wild populations; specific efforts are underway to address the same with regard to stocked fish.

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Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus</i> <i>argentissimus</i>)	1	4.9	Prevent loss of fish in irrigation canal diversions	Partially Complete	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, Utah State University, University of Nevada Las Vegas, Washington County Water Conservancy District, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Management: Predator and Competitor Control	Contract, Internal Administrative, Internal Field Assistance, Internal Technical Assistance	Wash Field Fish Screen complete summer, 2005; other canals may require similar efforts.
Virgin River Chub (<i>Gila seminuda</i> (=robusta)), Woundfin (<i>Plagopterus</i> <i>argentissimus</i>)	3	5	Develop and implement educational and informational programs highlighting recovery needs and ongoing efforts for Virgin River fishes	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Ecological Services Division, Nevada Department of Wildlife, Arizona Department of Game and Fish, U.S. Bureau of Land Management, Utah Division of Wildlife Resources	Acquisition: Management Agreement, Other: Information and Education	Contract, Internal Administrative	This task will continue until recovery is obtained.